

REMARKS

The Office Action dated March 31, 2006 has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response thereto.

Claims 1, 4, 5, 17-23, 26 are amended and claim 3 is cancelled without prejudice.

Claims 1 and 23 are amended to particularly point out and distinctly claim the subject matter of the present invention. Claims 4 and 17 are amended to correct informalities.

Claim 5 is amended to change its dependency to claim 3. Applicants are grateful for the indication that claims 18-23 would be allowable if rewritten into independent form. Accordingly, claims 18-23 are rewritten into independent form and are therefore allowable. New claim 27 is added. No new matter is added. Claims 1, 2, and 4-27 are respectfully submitted for consideration. The rejection of claim 3 will also be addressed because the subject matter of claim 3 is incorporated into claims 1 and 26.

The Office Action rejected claims 1, 2, 8, 10-11, 14, 15, 17, and 24-26 under 35 U.S.C. 102(a) as being anticipated by US Patent No. 6,295,454 to Havanis et al. (Havanis). Applicants respectfully submit that Havanis fails to disclose or suggest all of the features recited in any of the pending claims.

Claim 1, from which claims 2, 4-17 and 24-25 depend, is directed to a method of estimating the location of a mobile device. Location information is collected. At least one of a plurality of different location methods is selected to provide a location estimate and the methods include using cell identity information. A location estimate is provided

based on the at least one selected location method and a virtual base station estimate is determined.

Claim 26 is directed to a system for estimating the location of a mobile device. The system includes a means for collecting location information. A means for selecting selects at least one of a plurality of different location methods to provide a location estimate said methods using cell identity information. A means for providing provides providing a location estimate based on the at least one selected location method. A means for determining determines a virtual base station estimate.

Applicants respectfully submit that each of the pending claims recited features that are neither disclosed nor suggested in any of the pending claims.

Havinis is directed to a telecommunications system and method where a mobile station is able to calculate its own position within a cellular network and reports the calculated location to the requester. The mobile station can determine and store the location of the mobile station (MS), along with a time stamp, in a memory at predefined intervals determined by the requestor. Once the location information has been calculated and stored, the MS can report all of the relevant historical location information to the requestor at predefined intervals determined by the requestor.

Applicants respectfully submit that Havinis fails to disclose or suggest at least the feature of determining a virtual base station estimate, as recited in claim 1 and similarly recited in claim 26.

In the rejection of claim 3, the Office Action admitted that Havinis failed to disclose or suggest at least this feature and asserted that US Publication No. 2003/0119524 to Carlsson (Carlsson) cures this deficiency.

Carlsson is directed to determining the position of a mobile station operating in a packet switched communication network, based on timing advanced values obtained through network initiated artificial cell hops. The mobile station may be instructed to perform a series of artificial cell changes so that timing advanced values may be obtained for the mobile station with respect to a plurality of neighboring base stations.

Applicants respectfully submit that Carlsson does not read upon the feature of the virtual base station formed when both cell information and reception information is combined to form a virtual base station estimate as recited in claims 1 and 26. As described in the specification of the present invention at least beginning on page 84 line 24 – page 85, the virtual base station estimate is one where the serving cell information and received direction location estimates are available, the coordinates of the received direction location estimate is then used as an additional neighbor cell for the received base algorithm. Furthermore on page 85 of the present specification, it is disclosed that the combined use of timing advance and received level measurements “the virtual BTS location estimate” gives the most accurate location estimate in the region of the highest density of the mobile users. At best, Carlsson discloses that the mobile station jumping between base stations to obtain more than one received value and therefore, does not read upon the feature of a virtual base station estimate, as recited in claims 1 and 26.

Applicants respectfully submit that because claims 2, 8, 10, 11, 14, 15, 17 and 24-25 depend from claim 1, these claims are allowable at least for the same reasons as claim 1, as well as for the additional features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that Havinis fails to disclose or suggest all of the features recited in claims 1, 2, 8, 10, 11, 14, 15, 17, and 24-26. Accordingly, withdrawal of the rejection of claims 1, 2, 8, 10, 11, 14, 15, 17, and 24-26 under 35 U.S.C. 102(a) is respectfully requested.

The Office Action rejected claims 3-7, 9, 12, 13, and 16 under 35 U.S.C. 103(a) as being obvious over Havinis, in view of Carlsson. The Office Action took the position that Havinis disclosed all of the features of these claim except for the feature of determining a virtual base station estimate. The Office Action asserted that Carlsson disclosed this feature. Applicants respectfully submit that the cited references, taken individually or in combination, fail to disclose or suggest all of the features recited in any of the pending claims. Specifically, Havinis is deficient at least for the reasons discussed above, and Carlsson fails to cure these deficiencies. The rejection of claim 3 is moot in light of the cancellation of this claim. Havinis and Carlsson are discussed above.

As discussed above, Applicants respectfully submit that because Carlsson fails to cure the admitted deficiencies of Havinis, the cited references, taken individually or in combination, fail to disclose or suggest at least the feature of determining a virtual base station estimate recited in claims 3-7, 9, 12, 13, and 16. Accordingly, withdrawal of the rejection of claims 3-7, 9, 12, 13 and 16 under 35 U.S.C. 103(a) is respectfully requested.

The Office Action objected to claims 18-23 as being dependent from a rejected base claim, but would be allowable if rewritten into independent form. Accordingly, claims 18-23 are amended into independent form. Accordingly, claims 18-23 are in condition for allowance.

New claim 27 is added. Applicants respectfully submit that the cited references fail to disclose or suggest all of the features recited in claim 26.

Applicants respectfully submit that each of claims 1, 2, 4-27 recite features that are neither disclosed nor suggested in any of the cited references. Accordingly, Applicants respectfully request that each of claims 1, 2, and 4-27 be allowed and this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Information Disclosure Statement w/PTO-1449
Additional Claim Fee Transmittal
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